CLAIMS

1. An alternating current (AC) generator comprising:

a casing defining an accommodation space therein;

a stator assembly supported in said accommodation space in said casing;

said stator assembly including stator slots/teeth and a 5-phase winding distributed through and among said stator teeth;

a rotor assembly including a plurality of pairs of opposed pole members rotatably disposed inside said stator assembly;

said pairs of pole members configured for energization in opposite magnetic polarity; and

a plurality of rectifiers to rectify output voltages generated by the 5-phase winding.

2. The AC generator of claim 1 wherein the number of stator slots, S_1, is represented by $S_1 = 10n\,p$ where n is any integer and p is the number of rotor pole pairs.

3. The AC generator of claim 1 wherein said stator slots number 10 times the number of pole pairs.

4. The AC generator of claim 2 wherein said stator slots number 60.

5. The AC generator of claim 4 wherein a majority of the phase winding is wound around five stator teeth then advanced five stator teeth

and again wound around five stator teeth and repeated until all the stator teeth are wound.

6. The AC generator of claim 4 wherein each phase winding is woven through a slot, turned out and run along said five stator teeth, woven through an adjacent slot, turned out and run along side five stator teeth, and repeated to configure a wave wind until all the stator teeth are included.

7. The AC generator of claim 4 wherein each phase winding of the five, 5-phase windings is offset two stator teeth from the adjacent phase winding.

8. The AC generator of claim 1 including a diode pair to capture zero sequence current.